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INSECT FEEDER

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The feeder described here was used in toxicological studies on muscoid flies. Measured quantities of liquid food materials or drugs may be administered quickly to individual specimens.

The feeder is a micropipette. A thin-walled glass tube, about 1 mm in diameter, is drawn from a vaccine tube. Its total volume is established gravimetrically, using the same liquid as is to be employed in feeding. A minute paper scale is ruled, according to the capacity of the tube, to express appropriate fractions. This should be done under temperature conditions similar to those to be used in subsequent experiments. The narrow paper scale is cemented (the ruling against the glass) to the tube with cellulose cement or shellac. The inked lines on the paper show up vividly when viewed through the tube. A second, somewhat larger but shorter, thin-walled tube is slipped over the pipette and scale and sealed watertight at the ends with cellulose or de Khotinsky cement. This method is easier than etching the glass. The ruling is more easily read, and the tube is sturdier than etched work.

The pipette will be filled completely by capillarity. Muscoid flies, and probably many other sucking insects, will feed readily when the filled pipette is held against the labellum. The volume of ingested liquid can be measured with accuracy. There is no waste or loss of fluid by evaporation.